DUAL DIFFERENTIAL LC VOLTAGE-CONTROLLED OSCILLATOR

ABSTRACT OF THE DISCLOSURE

A differential voltage-controlled oscillator (VCO) employs at least two pairs of varactors, each pair of varactors driven with a corresponding differential control voltage, to generate a differential oscillating waveform. The capacitance of each pair of varactors adds to form the total capacitance of an inductor-capacitor (LC) tank circuit of the VCO, which determines an oscillation frequency of the differential oscillating waveform of the VCO. One differential control voltage controls a capacitance of the first varactor pair for a relatively coarse adjustment of the oscillation frequency, and the other differential control voltage controls a capacitance of the second varactor pair for a relatively fine adjustment of the oscillation frequency.